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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/621,140

07/16/2003

Michel F. Sultan

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DELPHI TECHNOLOGIES, INC.

M/C 480-410-202

PO BOX 5052

TROY, MI 48007

EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,140

Applicant(s)

SULTAN ET AL. 

Examiner

Gail Verbitsky

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2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 25-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 11, 17 and 19 is/are rejected.
- 7) ☒ Claim(s) 2-6, 8-10, 12-16, 18 and 20-24 is/are objected to.
- 8) ☒ Claim(s) 25-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/16/03 01/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Invention I (claims 1-24) in the reply filed on November 15 is acknowledged. Since Applicant did not indicate the condition of the election (with or without traverse), the election is considered to be without traverse. Claims 25-31 have been withdrawn by the examiner as directed to non-elected invention.

Claim Objections

2. Claims 1, 8, 11, 18, 23 are objected to because of the following informalities: Claims 1, 11: perhaps applicant should describe the resistance such as: electrical or thermal or bulk in the claims. Also, perhaps applicant should add —resistance—after “change” in the very last line of claim 1, and in line 9 of claim 11 in order to clearly describe the invention.

Claims 8 and 18: “said first membrane”, “said second substrate” lack antecedent basis. Perhaps claim 8 should depend on claim 2, and claim 18 should depend on claim 12. Furthermore, please note, that in the rejection on the merits, the Examiner considers that claim 8 is dependent on claim 2 and claim 18 is dependent on claim 12.

Claim 23: “said first varying portion” lacks antecedent basis. Perhaps claim 23 should depend on claim 24. Furthermore, please note, that in the rejection on the merits, the Examiner considers that claim 23 is dependent on claim 24.

Appropriate correction is required.

Specification

3. The abstract of the disclosure is objected to because it is not clear from the claims and the specification if the resistances are deposited onto the substrate and the membrane, or said resistances are the substrate own resistance and the membrane own resistance. Clarification and correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The term "primarily" in claims 1, 11 is a relative term, which renders the claim indefinite. The term "primarily" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Renken et al. (U.S. 4542650) [hereinafter Renken].

Renken discloses in Figs. 1-2 a device in the field of applicant's endeavor comprising a first resistance temperature sensor on a substrate, and thus, responsive/

configured to the resistance related temperature of the substrate, a second resistance temperature sensor on a membrane, and thus, responsive/ configured to the resistance related temperature of the membrane. The sensors (Fig. 2) are connected to a bridge, as described by Applicant, and thus, in series, and further to a controller/ amplifier to determine the difference voltage related to difference in resistances and thus, in temperatures sensed by the sensors.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7, 17, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renken.

Renken discloses the device as stated above. Renken does not explicitly teach a resistance material and the resistance material thermal coefficient of resistance.

With respect to claims 7, 17: The particular material having the particular thermal coefficient or resistance, i.e., about 1200 ppm, absent any criticality, is only considered to be the "optimum" material used by Renken that a person having ordinary skill in the art at the time the invention was made would have been able to determine using routine experimentation based, among other things, on the range of the measured temperature and the environment where the temperature is to be measured, etc. **See *In re Boesch*, 205 USPQ 215 (CCPA 1980).**

With respect to claim 19: Making the substrate resistance and the membrane resistance of substantially the same material, and thus, inherently, having the same thermal coefficient of resistance, absent any criticality, is only considered to be the "optimum" material used by Renken that a person having ordinary skill in the art at the time the

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invention was made would have been able to determine using routine experimentation based, among other things, on the range of the measured temperature and the environment where the temperature is to be measured, etc. **See *In re Boesch*, 205 USPQ 215 (CCPA 1980).**

Allowable Subject Matter

10. Claims 2-6, 8-10, 12-16, 18, 20-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571/ 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GKV

Gail Verbitsky
Primary Patent Examiner, TC 2800



January 20, 2006